

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes additional Figure 3A. This figure is a new figure and shows insulation element 29.

Attachment: New Drawing Figure 3A

REMARKS/ARGUMENTS

The specification has been amended to incorporate language that introduces new Figure 3A. The Examiner has objected to the drawings under 37 CFR 1.83(a). The Examiner stated that the drawings must show every feature of the invention specified in the claims. The Examiner notes that the insulating material disposed between the first bottom chord member and the second bottom chord member at the point of connection of the at least one web member to the first bottom chord member must be shown or the feature(s) canceled from the claim(s). The Examiner reminded Applicant that no new matter should be entered.

Applicant has added a new drawing, Fig. 3A to show in detail the lower bottom chord member 14 and the upper bottom chord member 16 and an insulating member 29 disposed there between. Figure 3A is submitted herewith for approval. Applicant submits that the addition of Fig. 3A does not constitute the entry of new matter. Support for the drawing showing insulation can be found in the specification (page 8, lines 28-29) and claims (claims 6, 11, 16, and 22). Because the new drawing shows the insulating member, the Examiner's objection to the drawings under 37 CFR 1.83(a) should be withdrawn.

The Examiner has found that the application contains claims directed to the following patentably distinct species of the claimed invention:

Species 1: Figures 1 and 3; and

Species 2: Figures 4 and 6.

The Examiner has noted that Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, the Examiner has found that no claims are generic.

The Examiner stated that during a telephone conversation with Michael Johnston on January 12, 2006 a provisional election was made without traverse to prosecute the invention of species 1, claims 1-22, and 33. The Examiner has reminded applicant that affirmation of this election must be made in replying to this Office action. The Examiner had withdrawn Claims 23-32 from further consideration. 37 CFR 1.142(b), on the basis that Claims 23-32 were drawn to a non-elected invention.

Applicant affirms the provisional election without traverse made during the January 12 telephone conversation, and requests prosecution on the merits of the invention of species 1, claims 1-22 and 33, as well as new claims 34-35.

The Examiner objected to Claims 4, 9, and 14 because of the following informalities: "less than about 1.2 nm" is indefinite. The Examiner has requested appropriate correction. Applicant respectfully disagrees with the Examiner. Claim 4 is dependent upon claim 1 and

states a range of thickness of the metal of the top and bottom chords and at least one web member as being "less than about 1.2 mm". It is well known that "a patent need not define his invention with mathematical precision in order to comply with the definiteness requirement." Oakley, Inc. v. Sunglass Hut International [316 F.3d 1331, 65 USPQ2d 132 (2003)]. Here applicant has provided a range of thickness of the truss components that one of ordinary skill in the art would understand. It is clear that the thickness of the metal must be sufficiently thick to bear the loads placed upon it once constructed. However, applicant believes that the range is such that one of ordinary skill in the art would design the thickness to ensure such successful construction of the structure.

The Examiner has rejected Claims 1-3, 5, 17-21, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Macomber (2457056). The Examiner states that in regards to claim 1, Macomber discloses a metal truss, comprising: a pair of elongated top chord members (12 & 13) each having a first end and a second end, the top chord members connected to each other at the first end; a first elongated bottom chord member (10), the ends of the first bottom chord member connected to the top chord members adjacent the second ends of the top chord members (Figure 1); a second elongated bottom chord member (11), the ends of the second bottom chord member connected to the top chord members adjacent the second ends of the top chord members such that the second bottom chord member is spaced from the first bottom chord member (Figure 1); and at least one web member (14) positioned between and interconnecting at least one top chord member and the first bottom chord member, one end of the web member connected to the at least one top chord member and the other end of the web member connected to the first bottom chord member.

Applicant respectfully disagrees with the Examiner's finding. Applicant submits that Macomber discloses a roof truss having a pair of rafter beams, an uppermost bottom chord and a lowermost bottom chord. Macomber does not disclose a truss where the top chord and the uppermost bottom chord are directly joined. Rather, Macomber discloses the rafter beam connected to a series of vertically oriented struts. In addition, Macomber does not disclose a lowermost bottom chord directly joined to the top chord. Thus, rejection of claim 1 on the basis of anticipation by Macomber is improper and should be withdrawn. Further, applicant submits that amended claim 1 is not rendered obvious in view of Macomber. Applicant submits that Macomber discloses a roof truss that has a pair of top chords and two spaced apart bottom chords. The uppermost bottom chord is attached to the top chord by means of vertically oriented struts. The lowermost bottom chord is connected to the uppermost bottom chord by means of vertically oriented load bearing plates, and to the top chord by means of vertically oriented end plates. Macomber does not disclose or describe the direct joining of both bottom chord members to the top chord members. This difference in the construction of the truss disclosed in Macomber does not render obvious claim 1 of the present invention.

Claims 2, 3 and 5 have also been rejected as being anticipated by Macomber. Due to the argument presented above in favor of allowance of claim 1, upon which claims 2, 3 and 5 depend, applicant submits that claims 2, 3 and 5 are also not anticipated by Macomber. Further,

in view of the arguments presented above, applicant submits that claims 2, 3 and 5 are not rendered obvious by Macomber.

The Examiner has rejected Claim 17 under 35 U.S.C. 102(b) as being anticipated by Macomber. The Examiner submits that Macomber discloses a metal truss, comprising: a plurality of elongated top chord members (12 & 13), the top chord members connected to each other end to end so that the connected top chord members have two free ends; a first elongated bottom chord member (10), the ends of the first bottom chord member connected to the top chord members adjacent the free ends of the connected top chord members; a second elongated bottom chord member (11), the ends of the second bottom chord member connected to the top chord members adjacent the free ends of the connected top chord members such that the second bottom chord member is spaced from the first bottom chord member (Figure 3); and at least one web member (14) positioned between and interconnecting at least one top chord member and the first bottom chord member, one end of the web member connected to the at least one top chord member and the other end of the web member connected to the first bottom chord member.

Applicant respectfully disagrees with the Examiner's rejection of claim 17 as being anticipated by Macomber. Macomber discloses a roof truss having a pair of top chords and a pair of spaced apart bottom chords. However, Macomber discloses that the top chords are connected to the uppermost bottom chord by means of a vertically oriented strut. The lowermost bottom chord is connected to the uppermost bottom chord by means of load bearing plates and to the top chord by means of vertically oriented end plates. Thus, rejection of claim 17 on the basis of anticipation by Macomber should be withdrawn.

Applicant also submits that claim 17 is not rendered obvious in view of Macomber. Macomber discloses a roof truss having a pair of top chords and a pair of spaced apart bottom chords. In Macomber, the top chords and bottom chords do not join directly as claimed in claim 17. Rather, the uppermost bottom chords in Macomber is connected indirectly to the top chords by means of vertical struts, and the lowermost bottom chord is connected to the uppermost bottom chord by load bearing plates. The lowermost bottom chord connects indirectly to the top chord by means of end plates. The invention disclosed and described in Macomber teaches away from the construction of the present invention as claimed in claim 17. In claim 17 there is a direct connection between the top chords and the first and second bottom chords. This is done, in part, to dissipate or minimize the potential for thermal bridging in metal trusses. This problem is not addressed in Macomber. In fact, the structure of claim 17 solves the problem of heat transfer created by the structure disclosed in Macomber. Thus, claim 17 is not rendered obvious in view of Macomber.

The Examiner has rejected Claim 18 under 35 U.S.C. 102(b) as being anticipated by Macomber (2457056). Applicant has amended claim 18 to include means for directly fastening first bottom chord member to top chord members. This is not disclosed in Macomber and thus rejection of amended claim 18 as being anticipated by Macomber should be withdrawn. Applicant further argues that rejection of claim 18 under 35 U.S.C. 103 would be improper. Macomber does not suggest or teach a truss in which the top chord and bottom chords are

directly connected. Rather, Macomber teaches away from direct connection between the top and bottom chords by introducing a vertical strut for such connection. Claim 18, as amended, would not be rendered obvious under Macomber.

The Examiner has rejected Claims 19-22 under 35 U.S.C. 102(b) as being anticipated by Macomber (2457056). In view of the foregoing amendments made to claim 18, from which claims 19-22 depend, claims 19-22 are no longer anticipated by Macomber. Thus, rejection on this basis should be withdrawn.

The Examiner has rejected Claim 33 under 35 U.S.C. 102(b) as being anticipated by Macomber (2457056). Claim 33 has been amended to delete “connecting means” and include “means for directly fastening” the first bottom chord member to the top chord members. Macomber does not disclose directly fastening the first bottom chord member to the top chord members. Rather Macomber discloses an uppermost bottom chord connected to a pair of top chords by means of a pair of vertically oriented struts. For this reason, claim 33 is not anticipated by Macomber. Because Macomber teaches connection between the top chord members and the uppermost bottom chord by means of vertically oriented links, claim 33, as amended, would not be rendered obvious in view of Macomber.

The Examiner has rejected Claims 7-10 and 12-15 under 35 U.S.C. 103(a) as being unpatentable over Macomber (2457056) in view of Ruppel (2201504). In regards to claim 7, the Examiner states that Macomber teaches a metal truss comprising a pair of elongated top chord members (12 & 13) each having a first end and a second end, the top chord members connected to each other at the first end; a first elongated bottom chord member (10), the ends of the first bottom chord member connected to the top chord members adjacent the second ends of the top chord members; a second elongated bottom chord member (11), the ends of the second bottom chord member connected to the top chord members adjacent the second ends of the top chord members such that the second bottom chord member is spaced from the first bottom chord member (Figure 3); and at least one web member (14) positioned between and interconnecting at least one top chord member and the first bottom chord member, one end of the web member connected to the at least one top chord member and the other end of the web member connected to the first bottom chord member, but does not teach a plurality of trusses and wall frames wherein the trusses are adapted to be erected upon a building system frame such that the second bottom chord member spans at least two wall frames and is connected to the top ends of the respective wall frames. The Examiner further states that Ruppel teaches a plurality of wall frames (14), each of the wall frames having a top end; a plurality of metal trusses, each of the trusses wherein the plurality of trusses are erected upon the frame such that the second bottom chord member spans at least two of the wall frames and is connected to the top ends of the respective wall frames (Figure 3). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the truss as taught by Macomber to have a plurality of the trusses be erected on wall frames as taught by Ruppel, as this is common in the art as a way to put a roof structure over a space enclosed by walls.

Applicant respectfully disagrees with the basis for the Examiner's rejection of claim 7. Macomber discloses a roof truss where the top chord members are connected indirectly to the uppermost bottom chord member by means of a vertically oriented strut. This configuration, in combination with the disclosure of Ruppel would not result in the present invention, as claimed in claim 7. Claim 7, as amended, is directed to a metal frame building system having a plurality of trusses. Each truss comprises a pair of top chords, a first bottom chord and a second bottom chord. The first bottom chord is directly fastened to the top chord members. This is not disclosed or described in Macomber or Ruppel. In fact, Macomber teaches away from direct fastening of the top chord with the uppermost bottom chord by introducing a vertically oriented strut. Thus, rejection of amended claim 7 on the basis of obviousness over Macomber in view of Ruppel is improper and should be withdrawn.

With regard to claims 8-10, claims 8-10 are dependent from claim 7. For the same reasons set forth above, claims 8-10 are not rendered obvious over Macomber in view of Ruppel. Thus, claims 8-10 should be allowed.

In regards to claim 12, the Examiner states that Macomber teaches a metal truss comprising a pair of elongated top chord members (12 & 13) each having a first end and a second end, the top chord members connected to each other at the first end, a first elongated bottom chord member (10), the ends of the first bottom chord member connected to the top chord members adjacent the second ends of the top chord members, a second elongated bottom chord member (11), the ends of the second bottom chord member connected to the top chord members adjacent the second ends of the top chord members such that the second bottom chord member is spaced from the first bottom chord member (Figure 3), and at least one web member (14) positioned between and interconnecting at least one top chord member and the first bottom chord member, one end of the web member connected to the at least one top chord member and the other end of the web member connected to the first bottom chord member, but does not teach a plurality of wall frames wherein the trusses are erected upon the wall frames and roofing material fastened to the top chord members. The Examiner further states that Ruppel teaches a plurality of wall frames (14), each of the wall frames having a top end; a plurality of metal trusses, each of the trusses wherein the plurality of trusses are erected upon the frame such that the second bottom chord member spans at least two of the wall frames and is connected to the top ends of the respective wall frames (Figure 3); and roof material fastened to the top chord members (Figure 4). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the truss as taught by Macomber to be erected on wall frames and to have roofing material fastened to the top chord members, as taught by Ruppel, as this would provide an enclosed roof system over a room to protect the interior of the walls from damage due to rain.

Applicant respectfully disagrees with the Examiner's finding with respect to claim 12. Macomber discloses a roof truss where the top chord and uppermost bottom chord are not connected. Rather, the top chord is indirectly connected to the uppermost bottom chord by means of a vertical strut. This teaches away from the present invention in that direct joining of the uppermost bottom chord and lowermost bottom chord with the top chord results in heat

transfer of the heat within the chord. This is a problem the present invention, as claimed in claim 12 solves over the prior art, such as Macomber. Accordingly, claim 12 is not rendered obvious over Macomber in view of Ruppel and should be allowed.

In regards to claims 13, 14 and 15, The Examiner has rejected Claims 13-15 under 35 U.S.C. 103(a) as being unpatentable over Macomber (2457056) in view of Ruppel (2201504). Claims 13-15 depend from claim 12. For the reasons set forth above arguing against rejection of claim 12 as being unpatentable on the basis of obviousness over Macomber in view of Ruppel, claims 13-15 should not be rejected for the same reasons.

The Examiner has rejected Claims 4, and 9 under 35 U.S.C. 103(a) as being unpatentable over Macomber (2457056). The Examiner stated that in regards to claims 4, and 9; Macomber discloses a truss made of metal as in the claims 1 and 7 above. The Examiner further states that Macomber does not address the thickness of the metal comprising the truss. The Examiner states that Applicant has not disclosed that having the metal be a specific thickness provides and advantage, solves any stated problem or is for any particular purpose. The Examiner further states that the truss of Macomber, or applicant's invention, would perform equally well with any thickness. The Examiner concludes that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified Macomber such that the thickness of the metal comprising the top and bottom chord members and the at least one web member to be less than about 1.2 mm because such a modification would have been considered a mere design consideration which fails to patentably distinguish over Macomber.

Applicant respectfully disagrees with the Examiner's rejection of claims 4 and 9. Macomber is directed to a roof truss where the top chord and upper bottom chord are connected by means of vertical struts. Applicant's design, where the upper lower bottom chord is joined directly to the top chord and the lower bottom chord is joined to the upper bottom chord enables the use of lighter gauge metal where such use was previously unsuitable. As stated in the specification: "a truss configuration of the present invention allows the use of light gauge metal, preferably having a thickness of less than about 1.2 mm." (page 10, lines 22-24). The range of thickness of metal claimed in claims 4 and 9 is not anticipated by Macomber and should be allowed.

The Examiner has rejected claims 6, 11, and 22 under 35 U.S.C. 103(a) as being unpatentable over Macomber (2201504) in view of Bertrand (4279112). The Examiner states that in regards to claims 6, 11, and 22: Macomber discloses a metal truss as in the claims above. The Examiner further states that Macomber does not disclose insulating material disposed between the first bottom chord member and the second bottom chord member at the point of connection of the at least one web member to the first bottom chord member. The Examiner also states that Bertrand discloses a method for improving thermic insulation of a building with a metal frame structure that includes using insulation to cover every metal framing member (Col. 4, lines 27-33 so that no exposed metal is present to act as a direct heat conductor (Col. 4, lines 48-52). The Examiner concludes that it would have been obvious at the time the invention was made to modify Macomber to have insulation at the chord members because the insulation would

prevent loss of heat because of the metal to metal contact at the connection of the chord members of the metal frame.

Applicant respectfully disagrees with the Examiner's rejection of claims 6, 11 and 22 under 35 USC 103(a) as being unpatentable over Macomber in view of Bertrand. Macomber discloses a roof truss where the top chord and uppermost bottom chord members are connected by means of a vertical strut. Macomber further discloses a roof truss where the uppermost and lowermost bottom chord members are connected by means of vertically oriented struts. Bertrand discloses the use of applying insulation material between fixed members to improve thermic insulation. If the invention as disclosed in Macomber were modified by the disclosure in Bertrand, the resulting embodiment would not be described in claims 6, 11 or 22. Rather, the invention would comprise a roof truss having top chords connected by means of vertical struts to an uppermost bottom chord, and a lowermost bottom chord connected to the uppermost bottom chord by means of vertical struts with an insulation material located there between. Because the resulting embodiment would not that described or disclosed in claims 6, 11 and 22, rejection of these claims on the basis of obviousness is improper. Claims 6, 11 and 22 should be allowed.

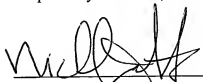
The Examiner has rejected claim 16 under 35 U.S.C. 103(a) as being unpatentable over Macomber (2457056) in view of Ruppel (2201504) as applied to claim 12 above, and further in view of Bertrand (4279112). The Examiner states that with regard to claim 16, Macomber in view of Ruppel discloses a metal truss as in claim 12 above. The Examiner admits that Macomber in view of Ruppel does not disclose insulating material disposed between the first bottom chord member and the second bottom chord member at the point of connection of the at least one web member to the first bottom chord member. The Examiner notes that Bertrand discloses a method for improving thermic insulation of a building with a metal frame structure that includes using insulation to cover every metal framing member (Col. 4, lines 27-33 so that no exposed metal is present to act as a direct heat conductor (Col. 4, lines 48-52). The Examiner concludes that it would have been obvious at the time the invention was made to modify Macomber to have insulation at the chord members because the insulation would prevent loss of heat because of the metal to metal contact at the connection of the chord members of the metal frame.

Applicant respectfully disagrees with the Examiner's rejection of 16 as reasoned above. As stated previously, in favor of allowance of claim 12, the combined teachings of Macomber and Ruppel would not result in the invention as claimed in claim 12. The result would be a building comprised of roof trusses where the roof trusses were constructed of top chords and bottom chords and where the uppermost bottom chord is connected to the top chord by means of a vertical strut. The addition of insulation disposed between the bottom chords would not result in the invention of claim 16. Thus rejection on the basis of obviousness of claim 16 is improper and should be withdrawn.

Applicant respectfully requests the reconsideration of the present application in view of the foregoing amendments and remarks. A timely Notice of Allowance is respectfully solicited.

If the Examiner has any questions about the present amendment, a telephone interview is requested.

Respectfully submitted,



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